

In the Claims:

1 - 7. (cancelled)

8. (currently amended) An apparatus for generating digital audio data comprising
a source of digital audio signals, and
a data encoding device having:

a serial data input;

an encoded serial data output;

a random number generator which generates a stream of random bits;

a transformation unit comprising means for storing a predetermined number of values of the
random bit to derive a multiple bit random word;

a permutation unit which generates an initial plurality of encoding bits from the multiple bit
random word; and

an encoding unit which combines each bit input on the serial data input with a plurality of
additional encoding bits forming an encryption key, to derive an encoded output bit and an
updated encryption key comprising a plurality of updated encodes bits, wherein an initial bit
input on the serial data input is encoded with an encryption key comprising the initial
plurality of ~~encodes~~ encoding bits output by the permutation unit and each subsequent input
bit is encrypted using an updated key which is derived from previous values of the encryption
key and of the input bit, and wherein over time the encoded output bit stream comprises
substantially white noise.

9. (original) An apparatus as claimed in claim 8, wherein the output at the
output port is in SPDIF or AES/EBU format.

10. (original) An apparatus as claimed in claim 8, comprising a compact disc player.

11 - 20. (cancelled)

21. (previously presented) An apparatus for reconstructing digital audio signals
comprising:

an input for receiving encoded digital audio signals;

a receiver for supplying the encoded digital audio signals to a decoding device;

and an output for the reconstructed digital audio signal; and

a decoding device comprising:

a serial data input;

a transformation unit comprising means for storing a predetermined number of values of random bits to derive a multiple bit random word;

a permutation unit which generates an initial plurality of bits from the multiple bit random word; and

an decoding unit which combines each bit input on the serial data input with a plurality of additional encoding bits forming a key, to derive an decoded output bit and an updated key comprising a plurality of updated bits, wherein an initial bit input on the serial data input is decoded with a key comprising the initial plurality of bits output by the permutation unit and each subsequent input bit is decrypted using an updated key which is derived from previous values of the key and of the input bit.

22. (previously presented) A data communications system comprising:

a data encoding device comprising:

a serial data input;

an encoded serial data output;

a random number generator which generates a stream of random bits;

a transformation unit comprising means for storing a predetermined number of values of the random bit to derive a multiple bit random word;

a permutation unit which generates an initial plurality of encoding bits from the multiple bit random word; and

an encoding unit which combines each bit input on the serial data input with a plurality of additional encoding bits forming an encryption key, to derive an encoded output bit and an updated encryption key comprising a plurality of updated encodes bits, wherein an initial bit input on the serial data input is encoded with an encryption key comprising the initial plurality of encoding bits output by the permutation unit and each subsequent input bit is encrypted using an updated key which is derived from previous values of the key and of the input bit, and wherein over time the encoded output bit stream comprises substantially white noise; and

a decoding device comprising:

a serial data input;

a transformation unit comprising means for storing a predetermined number of values of random bits to derive a multiple bit random word;

a permutation unit which generates an initial plurality of bits from the multiple bit random word; and

an decoding unit which combines each bit input on the serial data input with a plurality of additional encoding bits forming a key, to derive an decoded output bit and an updated key comprising a plurality of updated bits, wherein an initial bit input on the serial data input is decoded with a key comprising the initial plurality of bits output by the permutation unit and each subsequent input bit is decrypted using an updated key which is derived from previous values of the key and of the input bit.